



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/441,083	11/16/1999	KIYOSHI SUKEGAWA	1614.1011	3835
21171	7590	11/14/2006		
STAAS & HALSEY LLP SUITE 700 1201 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005			EXAMINER TRAN, DZUNG D	
			ART UNIT 2613	PAPER NUMBER

DATE MAILED: 11/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/441,083

Applicant(s)

SUKEGAWA ET AL.

Examiner

Dzung D. Tran

Art Unit

2613

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 September 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 6-11 is/are allowed.
- 6) ☒ Claim(s) 1, 3-5, 12-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

DETAILED ACTION

Specification

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 3, 5, 12-18 and 19-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jennings et al. US publication no. 2002/0015200 in view of Koga et al. US patent no. 5,995,254 and further in view of Touma et al. US patent no. 6,288,809.

In considering claims 1, 12-17 and 18, Jennings discloses a system and method for monitoring and characterizing optical links, the transmission line monitoring comprising:

a first optical coupling unit (figure 2, element 124, paragraph 0016, line 3) which couples a down data signal of a first wavelength (figure 2, element λ_2 , paragraph 0016, line 4) and a test signal (same as claimed examination signal) of a second wavelength (figure 2, element λ_1 , paragraph 0016, line 2) so as to transmit a first coupled signal (λ_1, λ_2) to a lower apparatus (paragraph 0016, lines 5-6);

a first optical dividing unit (figure 2, element 128, paragraph 0016, line 7) to demultiplex said first coupled signal (λ_1, λ_2) from said optical coupling unit so as to

Art Unit: 2613

divide and split said first coupled signal (λ_1 , λ_2) into said down data signal with the first wavelength (λ_2) and said examination signal with the second wavelength (λ_1), said examination signal (λ_1) being return;

a second optical coupling unit (figure 2, element 130, paragraph 0016, line 9) which couples an up data signal with the third wavelength (λ_3) and said examination signal (λ_1) from said first optical dividing unit 128 so as to transmit a second coupled signal (λ_1 , λ_3) toward a host apparatus;

a second optical dividing unit (figure 2, element 126, paragraph 0017, line 9) to demultiplex said second coupled signal (λ_1 , λ_3) from said second optical coupling unit 130 so as to divide said second coupled signal (λ_1 , λ_3) into said up data signal with the first wavelength (λ_3) and said examination signal with the second wavelength (λ_1);
a monitoring shelf unit 122 which monitors and determined a fault and a location of said fault by using said examination signal with the second wavelength λ_1 (page 2, paragraphs 0018, 0019). Jennings differs from claims 1 and 12-17 of the present invention in that Jennings does not specifically disclose a specific wavelength (for example λ_2) for an up data signal (e.g. the invention claimed the up data signal of the first wavelength λ_2) and wherein the first optical coupling unit, said first optical dividing unit, said second optical coupling unit, and said second optical dividing unit are formed of passive elements.

Koga discloses a DWM light transmitting system which can monitor its transmission line (abstract) having the same wavelength (λ_1) for transmitting the down

data signal and up data signal (figure 2). Since the down data signal and up data signal is transmitting through different links (e.g. up line and down line) and therefore no interference between down data signal and up data signal, it would have been obvious to an artisan at the time of the invention was made to include the teaching of Koga in the transmission line monitoring of Jennings. One of an ordinary skill in the art would have been motivated to do that in order to use the same components (e.g. same LED for outputting same wavelength, or filter for filtering the same wavelength) through out the system, thus it reducing maintenance costs associated with the system.

Touma discloses an optical network having an optical star coupler SC (e.g., equivalent to a multiplexer/demultiplexer) is a passive optical device (col. 1, lines 23-26, col. 2, lines 28-32) . At the time of the invention was made, it would have been obvious to a person of ordinary skill in the art to replace the demultiplexer, multiplexer of Jennings with the passive multiplexer/demultiplexer taught by Touma, furthermore, examiner take an official notice that passive multiplexer/demultiplexer is well recognized in the art. One of ordinary skill in the art would have been motivated to do this in order to formed a passive optical transmission system that is the optical system for transmitting the optical line without optical/electrical conversion, thus it's reduce the system cost.

In considering claim 3, Jennings further discloses a laser test source (same as first examination signal generator) (figure 2, element 120) which generates said examination signal with the second wavelength (figure 2, element $\lambda 1$).

In considering claim 5, Jennings further discloses a WDM coupler 128 which perform the same function as the examination generator that is divides an input down data signal into two signals, one signal being converted into said down data signal with the first wavelength, the other signal being converted into said examination signal with the second wavelength.

Regarding claims 19-24, Koga further discloses in figure 2, up data signal with the first wavelength λ_1 includes at least portion of said down data signal (figure 2, col. 3, lines 60-67).

3. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jennings et al. US publication no. 2002/0015200 in view of Koga et al. US patent no. 5,995,254 and Touma et al. US patent no. 6,288,809 and further in view of Tsushima et al. US patent no. 5,500,756.

In considering claim 4, as per claims above, the combination of Jennings, Koga and Touma discloses all the limitations and Koga further disclose monitoring unit including which monitors a signal level of said examination signal with the second wavelength and, if said signal level is lower than a predetermined signal level (column 3, lines 21-25). The combination of Jennings, Koga and Touma does not disclose an alarm information output unit which monitors a signal level of the examination signal with the second wavelength and, if the signal level is lower than a predetermined signal level, then outputs an alarm information and insert the alarm information into an up data signal to be transmitted to the host apparatus and controls start and stop of the alarm

Art Unit: 2613

information output unit and start and stop of the alarm information display/transferring unit. Tsushima from the same field of endeavor, discloses an optical system having a supervisory equipment (see figure 10) including a power monitor 9 for detecting data power P_d and a controller 10 for comparing with the normal value to judge that whether the optical equipment is failure then output an alarm signal (col. 2, line 62 to col. 3, line 8). It would have been obvious to an artisan at the time of the invention was made to include the teaching of Tsushima in the transmission line monitoring of Jennings, Koga and Touma. One of an ordinary skill in the art would have been motivated to do that in order to inform the system maintenance technician (visible or audible) of the system failure information (e.g. fault location or failure equipment).

4. Claims 6-11 are allowed.

Response to Arguments

5. Applicant's arguments that the SC of Touma does not demultiplex an optical signal nor multiplex signals having difference wavelength. However, as the rejection of claim 1, Touma discloses an optical network having an optical star coupler SC (e.g., equivalent to a multiplexer/demultiplexer) is a passive optical device (col. 1, lines 23-26, col. 2, lines 28-32) . At the time of the invention was made, it would have been obvious to a person of ordinary skill in the art to replace the demultiplexer, multiplexer of Jennings with the passive multiplexer/demultiplexer taught by Touma, furthermore,

examiner take an official notice that passive multiplexer/demultiplexer is well recognized in the art.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dzung D Tran whose telephone number is (571) 272-3025. The examiner can normally be reached on 9:00 AM - 7:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (571) 272-3022. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2613

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Dzung Tran
11/05/2006


DZUNG TRAN
PRIMARY PATENT EXAMINER